**PROGRAM**:

#include<stdio.h>

int main()

{

int bt[20],p[20],wt[20],tat[20],pr[20],i,j,n,total=0,pos,temp,avg\_wt,avg\_tat;

printf("Enter Total Number of Process:");

scanf("%d",&n);

printf("\nEnter Burst Time and Priority\n");

for(i=0;i<n;i++)

{

printf("\nP[%d]\n",i+1);

printf("Burst Time:");

scanf("%d",&bt[i]);

printf("Priority:");

scanf("%d",&pr[i]);

p[i]=i+1; //contains process number

}

//sorting burst time, priority and process number in ascending order using selection sort

for(i=0;i<n;i++)

{

pos=i;

for(j=i+1;j<n;j++)

{

if(pr[j]<pr[pos])

pos=j;

**EXPERIMENT NO:**

**CPU SCHEDULING ALGORITHMS**

PRIORITY

**AIM:**

To write a C program for implementation of Round Robin scheduling algorithms.

**ALGORITHM**:

Step 1: Inside the structure declare the variables.

Step 2: Declare the variable i,j as integer, totwtime and totttime is equal to zero.

Step 3: Get the value of 'n' assign p and allocate the memory.

Step 4: Inside the for loop get the value of burst time and priority.

Step 5: Assign wtime as zero.

Step 6: Check plil pri is greater than plil pri

Step 7: Calculate the total of burst time and waiting time and assign as turnaround time.

Step 8: Stop the program

}

temp=pr[i];

pr[i]=pr[pos];

pr[pos]=temp;

temp=bt[i];

bt[i]=bt[pos];

bt[pos]=temp;

temp=p[i];

p[i]=p[pos];

p[pos]=temp;

}

wt[0]=0; //waiting time for first process is zero

//calculate waiting time

for(i=1;i<n;i++)

{

wt[i]=0;

for(j=0;j<i;j++)

wt[i]+=bt[j];

total+=wt[i];

}

avg\_wt=total/n; //average waiting time

total=0;

printf("\nProcess\t Burst Time \tWaiting Time\tTurnaround Time");

for(i=0;i<n;i++)

{

tat[i]=bt[i]+wt[i]; //calculate turnaround time

total+=tat[i];

printf("\nP[%d]\t\t %d\t\t %d\t\t\t%d",p[i],bt[i],wt[i],tat[i]);

}

avg\_tat=total/n; //average turnaround time

printf("\n\nAverage Waiting Time=%d",avg\_wt);

printf("\nAverage Turnaround Time=%d\n",avg\_tat);

return 0;

}

**OUTPUT**

**Enter Total Number of Process:3**

**Enter Burst Time and Priority**

**P[1]**

**Burst Time:6**

**Priority:3**

**P[2]**

**Burst Time:2**

**Priority:2**

**P[3]**

**Burst Time:4**

**Priority:1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Process** | **Burst Time** | **Waiting Time** | **Turnaround Time** |
| **P[3]** | **4** | **0** | **4** |
| **P[2]** | **2** | **4** | **6** |
| **P[1]** | **6** | **6** | **12** |

**Average Waiting Time=3**

**Average Turnaround Time=7**

**RESULT:**

The program is success fully executed.